

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-19. (Cancelled)

20. (Previously Presented) A rotor configured to treat waste or recycled material, comprising;

a rotor housing having a center axis and configured to receive a material;

an inner deflector wall within the rotor housing configured to rotate about the center axis, wherein rotation of the deflector wall decomposes the materials into components, the rotation of the deflector wall causes the material to move in a substantially helical transport path in a first direction;

an outer deflector wall concentric with the inner deflector wall and separated by a gap in which the material moves between the inner and outer deflector walls, the inner and outer deflector walls each including at least one protrusion extending therefrom toward the gap and offset from one another, wherein the material decomposes upon striking the protrusions; and

a port configured to inject process air into the rotor housing, wherein the air moves in a substantially helical airflow path in a second direction opposite to the first direction.

Claims 21-24. (Previously Cancelled)

25. (Previously Presented) The rotor of claim 20, wherein the material is a composite having a metal component, wherein the metal component is deformed into a substantially sphere-like shape upon being decomposed.

26. (Previously Presented) The rotor of claim 20, wherein the material includes particles entering the rotor housing are between and including 10 mm and 50 mm in size.

27. (Previously Presented) The rotor of claim 20, wherein the first direction of the transport path is downward and the second direction of the airflow path is upward with respect to the rotor housing.

28. (Cancelled)

29. (Previously Presented) The rotor of claim 20, wherein the process air expedites removal of the components from within the rotor housing.

Claims 30-43. (Cancelled)